

Introduction of Laser Value Proposition



15th October 2020



ML Engraving is the first Italian Company in laser engraving and laser texturing on moulds.



ML's headquarter



- **1999** year of foundation
- **40** working team
- **26** years old average
- **5M** turnover
- **17** laser machines
- **2000** sqm factory
- **3** patents
- **8** EU Projects granted

ML developed a unique workflow that combines sophisticated co-design softwares and the most updated laser technology.

ML Engraving has developed 3 different business lines:

Touch & Feel

Laser engraving of 2D and 3D textures on **moulds** for plastic/rubber products



Wellington Boots for Bottega Veneta

Just in Time

Laser engraving of writings, codes, logos on **moulds** for plastic/rubber components



Logos & writings



Micro-engravings

Nuovo Cesello

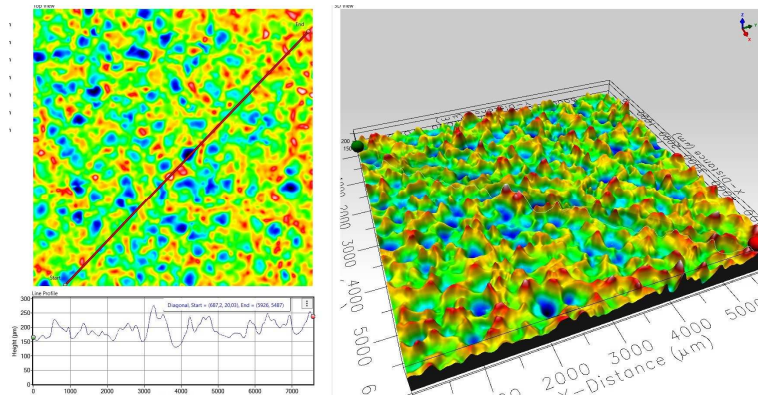
Laser engraving of textures or artistic decorations on metal products



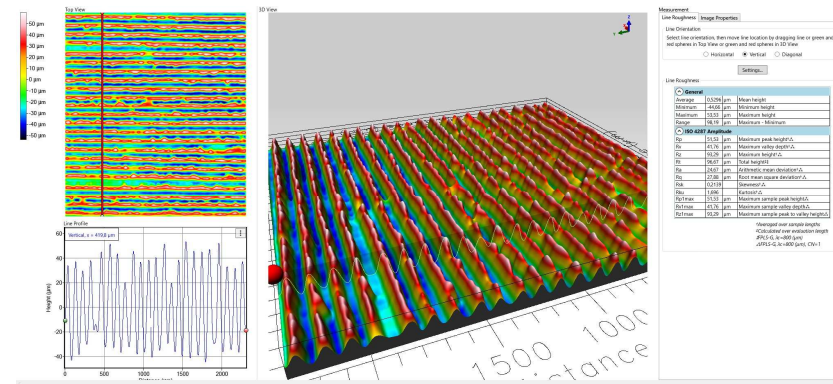
486 by Marc Newson - Beretta

Plastics and rubber supply chain

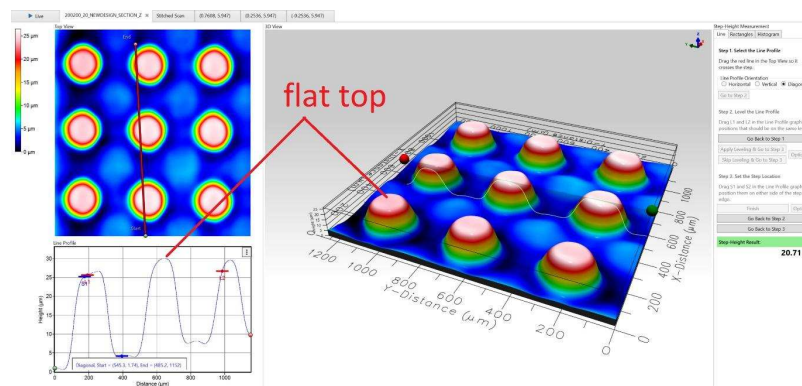
Some goals achieved with our technology:



CH42-PT: Study for Technology Replacement (VDI 3400).



Anti-Ice Microstructures: Texture to reduce icing for aircraft (on aluminum).



Dimples: Friction Management Texturing.

ML Engraving has several laser machines available which allow it to face and solve the various customers requests.

WORKING SPACE (MM XYZ AXIS)	LASER SOURCE	AXIS CONFIG
800x500x750	YPL v2 1 100 100	2+3
1100x550x650	YPL 1-120-50-50 HC RG	2+3
3200x2200x1450	YPL v2 1 100 100	5
Robot harm	YPL v2 1 100 100	6
Only focal axis plane	DCD315V1027Coherent CO2 c-20	Manual
1000x550x880	YPL 1-120-50-50 HC RG	3+2
1000x550x880	YPL v2 1 100 100	3+2
1000x550x880	YPL v2 1 100 100	3+2
1000x550x880	YPL v2 1 100 100	3+2
1000x550x880	YPL v2 1 100 100	3+2
1200x900x1200	YPL v2 1 100 100	3+2
2500x1400x1100	YPL v2 1 100 100	3+2
Only focal axis plane	Vgen Mopa 30 W	Manual
350x300x200	YLR-1500-mm-WC	3+1
2700x1600x970	YPL 1-120-50-50 HC RG	3
2700x1600x970	YPL v2 1 100 100	5
2700x1600x970	YPL v2 1 100 100	5

Thanks to this variability it is possible every time to use the most suitable laser machine for every need and based on the result to be obtained.



Stage1_02



R&D's lab in ML Engraving



Stage1_03



LGM 150



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Thank You for Your Attention

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